

IN THE SPECIFICATION

At page 2, please amend the paragraphs beginning on line 14 through line 30 as follows:

A method of automatically tuning a loop-filter of a phase locked loop is proposed. The loop-filter realizes a capacitance at an output of a charge pump of the phase locked loop, and the charge pump provides current impulses to the loop-filter. The proposed method comprises adjusting the amplitude of the current impulses output by the charge pump independently of said phase locked loop and essentially proportionally to the capacitance at the output of the charge pump.

Moreover, a phase locked loop is proposed, which comprises a loop-filter and a charge pump for providing current impulses to the loop-filter. The loop-filter realizes a capacitance at an output of the charge pump. The proposed phase locked loop further comprises a tuning component for adjusting the amplitude of current impulses output by the charge pump independently of said phase locked loop and essentially proportionally to the capacitance at the output of the charge pump.

At page 3, please amend the paragraph beginning on line 1 as follows:

The invention proceeds from the consideration that a constant response of the loop-filter of a PLL is given, if the product of the impedance realized by the loop-filter at the output of a charge pump of the PLL on the one hand and the current supplied by the charge pump to the loop-filter on the other hand is constant. It is therefore proposed that variations in the capacitance at the output of the charge pump are compensated by adjusting the amplitude of the current impulses output by the charge pump. More specifically, the amplitude of the current impulses is adjusted independently of the phase locked loop and proportionally to the capacitance, i.e. the higher the capacitance, the higher the amplitude of the current impulses.

At page 3, please amend the paragraphs beginning on line 20 through page 4 line 11 as follows:

In one embodiment of the invention, the output current of the charge pump is adjusted by providing a bias current to the charge pump, which is adjusted independently of the phase locked loop and essentially proportionally to the capacitance at the output of the charge pump.

Such a bias current can be provided for instance by a switched capacitor current generator, which is independent of the phase locked loop and suited to generate a current proportional to an included capacitor. Switching elements, like transistors, are used to this end for alternating a charging direction of the capacitor, and a converting element, which may include as well one or more transistors, is used for converting a voltage across the capacitor into a proportional current. If the capacitor is integrated on a single chip with the loop-filter, and if the capacitor has a capacitance which corresponds essentially to the capacitance realized by the loop-filter at the output of the charge pump, also variations in the capacitance of the capacitor of the current generator and in the capacitance at the output of the charge pump will correspond to each other. The current generator is therefore able to independently generate a bias current which is proportional to the capacitance at the output of the charge pump. A switched capacitor connection is described for example in Microelectronic circuits - Sedra-Smith, Saunders College Publishing.

At page 6, please amend the paragraph beginning on line 18 as follows:

For achieving or maintaining a locked state, the charge pump 22 generates current impulses, the lengths of which are controlled by the output signal of the phase detector 21. As indicated by its name, the charge pump 22 thus pumps charges i.e. a supplied current. The amplitude I_{cp} of the impulses is independently controlled by a bias current of the charge pump 22. The current impulses of the charge pump 22 are fed into the loop-filter 23.